Abstract Submitted
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Multiple pairing gap structures in rare earth nuclei[1] W.D. KULP, Georgia Tech — Detailed experimental studies using multiple spectroscopic techniques reveal two extensive families of rotational bands in ^{152}Sm that are remarkably similar. This result suggests that there are two coexisting shapes which strongly mix. Experimental results and a prescription of two-state mixing calculations are presented which describe the level energies of the ground-state and first excited (0^+ state) rotational bands, electric monopole transition rates, electric quadrupole matrix elements, and the isomer shift of the first excited 2^+ state.

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